

WE CLAIM

1. An isolated nucleic acid molecule encoding CA125.
2. The isolated nucleic acid molecule of claim 1 comprising the sequence of SEQ ID NO: 4.
3. The isolated nucleic acid molecule of claim 2 wherein the sequence has at least about 70% homology with SEQ ID NO: 4.
4. The isolated nucleic acid molecule of claim 2 wherein said molecule is a fragment thereof.
5. An isolated nucleic acid molecule comprising the sequence shown in SEQ ID NO: 1.
6. The isolated nucleic acid molecule of claim 5 wherein the sequence has at least about 70% homology with SEQ ID NO: 1.
7. The isolated nucleic acid molecule of claim 5 wherein said molecule is a fragment thereof.
8. An isolated nucleic acid molecule comprising the sequence shown in SEQ ID NO: 2.
9. The isolated nucleic acid molecule of claim 8 wherein the sequence has at least about 70% homology with SEQ ID NO: 2.
10. The isolated nucleic acid molecule of claim 8 wherein said molecule is a fragment thereof.
11. An isolated nucleic acid molecule comprising the sequence shown in SEQ ID NO: 3.
12. The isolated nucleic acid molecule of claim 11 wherein the sequence has at least about 70% homology with SEQ ID NO: 3.
13. The isolated nucleic acid molecule of claim 11 wherein said molecule is a fragment thereof.
14. A polypeptide with the amino acid sequence selected from the group consisting of: (a) the amino acid sequence set forth in SEQ ID NO: 5; (b) an amino acid sequence having at least 50% sequence identity to said sequence; (c) a conservative variant of an one of (a) to (b); and (d) a fragment of any one of (a) to (c).
15. A purified antibody that selectively binds to an amino acid sequence of the CA125 protein:
 - (a) wherein the amino acid sequence of the CA125 protein comprises the amino acid sequence set forth in SEQ ID NO: 5;

- (b) an amino acid sequence having at least 50% sequence identity to said sequence;
 - (c) a conservative variant of any one of (a) to (b); and
 - (d) a fragment of any one of (a) to (c).
16. The purified antibody of claim 15 wherein said sequence identity is at least 60%.
17. The purified antibody of claim 15 wherein said sequence identity is at least 70%.
18. The purified antibody of claim 15 wherein said sequence identity is at least 80%.
19. The purified antibody of claim 15 wherein said sequence identity is at least 90%.
20. A method to make a purified fragment of the CA125 polypeptide of SEQ ID NO: 5 comprising:
- (a) expressing a portion of the isolated nucleic acid molecule set out in SEQ ID NO: 4 to obtain a fragment of the CA125 molecule; and
 - (b) purifying said fragment of the CA125 molecule.